



DISASTER
RELIEF

CASE REPORT
Korea—Floods
August & September, 1973

Agency for International Development
Washington, D.C. 20523

REPUBLIC OF KOREA

Floods

On August 18 and 19, 1972, heavy rainfall which accompanied Typhoon "Betty" caused the Han River to overflow its banks and flood extensive areas in the northern region of the country. Torrential downpours on August 25 and again on September 13 and 14 prolonged the flooding, resulting in the most devastating flood disaster in the recorded history of South Korea. 672 people died, 785 were injured, over 800,000 were affected. 23,064 homes were destroyed and 37,000 other buildings were damaged. There were 3,800 washouts on 212 miles of road, 290 on 23 rail routes and 4,000 on river embankments. 502 bridges, 28 mining installations, two thermal power plants and 81 industries sustained damages. Over 30,000 acres of farmland were inundated with crop losses estimated at \$10 million. The Government of South Korea estimated total dollar damage at \$72.8 million.

Value of U.S. Government Assistance	\$298,710
Value of U.S. Voluntary Agencies' Assistance	\$586,792
Value of Other Nations & International Organizations Assistance	\$153,023

Foreign Disaster Case Reports are publications of the Office of the Foreign Disaster Relief Coordinator, Agency for International Development. This office has responsibility for coordinating U.S. Government foreign disaster relief responses and for the further coordination of such activities with those of the U.S. private and international disaster relief communities.

ACKNOWLEDGEMENT

The Coordinator acknowledges assistance received in the preparation of this and other case reports from the many public and private organizations in the United States and abroad engaged in foreign disaster relief.



Photos by: CATHOLIC RELIEF SERVICES

The Han River overflowed its bank, cresting at 36-1/2 feet, flooding a large portion of the low-lying residential and downtown areas of Seoul.

On August 19 a recorded 18 inches of rain fell on Seoul and its environs in five hours. The Han River, which flows through the center of Seoul, overflowed, having risen from a normal depth of 4-1/2 feet to a crest of 36-1/2 feet. Massive landslides resulted. Seoul, with its population of five million, was the most severely affected city. In Pyongchang-dong in the northern part of Seoul, at least 23 shanties were buried in a mudslide, killing 31 people and leaving 22 missing and feared dead. Another hard-hit area was Mongwon-dong in the western part of the city. Fortunately, most of its 25,000 residents abandoned their homes before the worst of the flooding and no drownings were reported.

Kyonggi and Kangwon Provinces also suffered extensive damage from floods and landslides. Some entire villages in these provinces were swept away. In Suwum, a city of 170,000 people located 25 miles south of Seoul, a recorded 17.9 inches of rain fell. A hill collapsed destroying 5 homes and killing 22 people.

The flood crippled utility services in the northern and central parts of the nation. Telephone and power lines were felled.

Water services were limited and some areas were without electricity. Four electric transformer stations in low-lying areas of Seoul were flooded causing a partial black-out of the city. Radio Dong-a had to cease broadcasting early on Saturday, August 19.

Kimpo International Airport outside Seoul was closed on Saturday but re-opened on Sunday. Domestic airline flights were cancelled. Rail transportation was almost completely disrupted. Road traffic was also paralyzed in some areas where bridges and roads were washed away. All of the Han River bridges in Seoul remained standing, but four of the six bridges were considered safe only for pedestrian traffic. The Seoul-Pusan Expressway remained open, but traffic was detoured in some areas and speed was reduced because of landslides. Access roads from Inchon and Osan to the expressway were washed out.

Most of the victims of the floods were the poor living in low-lying shanty areas on the river's edge. Their homes and all their possessions were swept away in the floods and landslides. They were left without shelter, clothing, blankets, or money. Their homes required rebuilding but since they had to

work they had no time to rebuild. Over 100,000 of these refugees were sheltered in churches and schools until their homes could be rebuilt.

On August 21 a massive clean-up drive began. More than half-a-million public servants, militiamen, and students were enlisted to repair damage and help the victims of the disaster. In Seoul, 470,000 people began pumping out water, repairing roads, and cleaning up debris. The entire national police force was put on round-the-clock duty and military units also participated in the relief operation.

Heavy rainfall resumed on August 25 and continued for 10 hours. During this period, Seoul received 3.3 inches of rain, Incheon received 4 inches, and Suwon received 4.5 inches. In some areas people who had returned to their homes following evacuation during the previous storm had to be re-evacuated. All rail traffic on the Seoul rail lines to Incheon, Pusan and Taegu was halted. No increase in the death toll was reported.

Again on September 13 and 14, torrential rains in the Pusan area resulted in floods and landslides which killed 75 people, left 15 missing, 54 injured and 1,500 homeless. Damage to roads, bridges and buildings was estimated at \$633,874.

ACTION TAKEN BY THE GOVERNMENT OF THE REPUBLIC OF KOREA AND LOCAL ORGANIZATIONS

The Korean National Relief Center (KNRC), headed by the Minister of Construction Chang Yie-Joon, was mobilized to coordinate the relief efforts of the Republic of Korea Government (ROK), voluntary agencies, and foreign governments. A Disaster Control Center was established in Seoul. President Park Chung Hee ordered his Cabinet ministers to mobilize manpower, equipment and materials for the rescue and relief operation. Provincial Anti-Calamity Committees were activated in each province affected by the disaster. The committees were headed by the provincial governor and consisted of the



This landslide in Suwan destroyed five houses killing 22 people.



Some of the evacuated people returned to their homes using makeshift rafts of empty gasoline drums tied together.

chiefs of various bureaus of the Provincial Government such as Social Affairs, Construction, Agriculture, etc. and the representatives of the cooperating agencies within the province. The Provincial Committees worked in coordination with the KNRC. The relief effort was effective and well-managed. Nearly \$20 million was made available by the ROKG for the rehabilitation of public facilities. In addition \$1.6 million in subsidies, \$6.2 million in loan funds and \$2.5 million in owner contributions were provided for the construction of 20,227 new homes. These were completed during 1972. In 1973, the ROKG expended another \$3.2 million for the restoration of 21,828 acres of flood-damaged farmland and for crop damage compensation estimated to be 29,473 metric tons. Altogether this flood assistance totaled \$32.5 million and represented about 45 percent of the estimated total rehabilitation costs.

The Korean Red Cross distributed some stockpiled relief supplies and appealed to the League of Red Cross Societies for assistance. The value of the donated supplies is unknown. Local business firms contributed to the relief effort in the amount of 50 million Won, or \$126,775.



A Korean returns to his home and wades through waist-deep muddy water retrieving personal belongings.

ASSISTANCE PROVIDED BY THE U.S. GOVERNMENT:

On August 19, 40 U.S. Army and 4 U.S. Air Force helicopters flew 641 sorties to locate and evacuate 3,899 marooned Koreans. During these sorties they also transported 87,300 pounds of relief supplies and distributed rice to stranded ROKG military and civilian personnel. Koreans evacuated to Osan were checked by USAF medics and given hot food and blankets before being taken to shelters provided in nearby towns by the ROKG. Hundreds of U.S. military vehicles were also used to rescue people in the Seoul, Osan and Chuncon areas. Costs of air sorties and other rescue operations were absorbed by the U.S. military and not reported to AID. However, FDRC estimates them to be at least \$150,000. In addition the U.S. Military donated 43,000 meals of "C" rations valued at \$38,000.

On August 22, on request of the ROKG, the U.S. Government donated 1.3 million pounds of Food for Peace flour for free distribution. The flour had been consigned to Catholic Relief Services and was diverted from Food for Peace stocks stored at Inchon and Pusan. The Food for Peace Program in

Korea is operated jointly by U.S. voluntary agencies in Korea and the ROKG. The Program provides food to more than 95,000 workers and their dependents in food-for-work programs. The wheat flour was to be replaced later to replenish Food for Peace Program stocks. The total value of this donation was \$56,970.

On August 23, the American Ambassador, Philip C. Habib, exercised his disaster relief authority to expend up to \$25,000 from the AID contingency fund, worldwide disaster relief account, for flood relief operations in South Korea. The same day \$10,000 was donated to the Korean National Relief Center to help bake the wheat flour donated by the USG, and on August 25 the remaining \$15,000 was presented in the equivalent of 5,962,500 Won as a cash grant to the President of the Korean Red Cross. The donation was reported in the Saturday morning editions of South Korean and English language newspapers.

On August 24 and 25, USAID/Korea donated \$28,740 worth of excess property items consisting of 17,455 first aid dressings, 114,140 pounds of mattresses, 500 steel beds, 7,800 pounds of sleeping bags, 38,020 pounds of blankets and 11,680 pounds of tent material. The U.S. Government continued to provide P.L. 480 food assistance through food-for-work programs after the emergency period was over.

Summary of USG Assistance

U.S. Military Contributions	\$188,000 ✓
P.L. 480 Food	56,970 ✓
FY 1973 AID Contingency Funds	25,000 ✓
USAID Excess Property	28,740 ✓
TOTAL \$298,710	

ASSISTANCE PROVIDED BY U.S. VOLUNTARY AGENCIES

Catholic Relief Services ✓

In addition to 600 metric tons of PL 480 wheat flour mentioned previously under USG contributions, CRS provided from its own resources:



A rice field destroyed by rushing flood waters. Crop losses were more than an estimated \$10 million.

Pesticides \$ 10,000
 Blankets 20,000
 Clothing 460,000
 10,000 pounds survival
 biscuits and 35
 drums of sanitation
 kits 7,529 \$497,529

American Korean Foundation

AKF donated blankets valued at . 252 ✓

Korean National Christian Council

The KNCC donated blankets and made an appeal to the World Council of Churches for additional assistance. The total value of KNCC aid was not reported . *

Christian Reformed World Relief Committee

CRWRC donated \$10,000 in cash for use by its personnel in Seoul for immediate relief efforts and shipped 25,000 pounds of clothing and blankets from Chicago by surface freight. Total value 46,734 ✓

Direct Relief Foundation

DRF shipped 500 pounds of vitamins and antibiotics by air to be administered by its Korea Medical Team. An additional donation of medicines was shipped by ocean freight also for distribution by DRF Medical Team. Total value . 37,761 ✓

American Chamber of Commerce
 Cash donation 2,516 ✓

Community Development Foundation
 Cash donation to assist urban families in Seoul 2,000 ✓

TOTAL \$586,792

ASSISTANCE PROVIDED BY INTERNATIONAL ORGANIZATIONS:

Australian Catholic Relief Services
 made a cash contribution to the CRS relief effort in the amount of \$5,000 ✓

The League of Red Cross Societies (LICROSS)
 shipped 255 packages of clothing and blankets from the LICROSS warehouse in Singapore, value unknown *

From its Guarantee Fund, LICROSS also made a donation to enable the commencement of a seven-day feeding program in the amount of \$25,960 ✓

LICROSS issued an appeal to national societies for assistance to Korea and the response was as follows:

Austria, cash	\$ 1,952 ✓
Canada, cash	153 ✓
Denmark, cash	154 ✓
Finland, cash	154 ✓
France, cash	154 ✓
Khmer Republic, cash	57 ✓
Luxembourg, cash	260 ✓
Monaco, cash	400 ✓
Netherlands, cash	154 ✓
Norway, cash	154 ✓
Philippines, cash	245 ✓
Portugal, cash	260 ✓
Singapore, cash	353 ✓
Sweden, cash and supplies	215 ✓
Switzerland, Red Cross and Government supplies	10,384 ✓
Turkey, cash	1,994 ✓
	\$17,043

OXFAM of England also contributed to CRS for its emergency program in the amount of \$ 2,500 ✓
 UNESCO made a cash donation of 520 ✓

ASSISTANCE PROVIDED BY FOREIGN GOVERNMENTS:

Australia donated	\$ 18,000 ✓
The Republic of China donated .	15,000 ✓
The Federal Republic of Germany donated	15,000 ✓
France donated	2,000 ✓
Great Britain donated	7,000 ✓
Japan donated	30,000 ✓
South Vietnam donated	15,000 ✓
Total Value Assistance Other Nations and International Organizations	\$153,023

* Not reported

